# A SPECIMEN OF SOLENOCHILUS PECULIARE FROM THE POTTSVILLE SERIES OF OHIO

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## INTRODUCTION

When Miller and Owen described *Solenochilus peculiare* from the Cherokee formation of Missouri in 1934, the holotype was the only specimen known to them. In February, 1936, while a graduate student at the Ohio State University, the writer discovered in the Geological Museum an unidentified specimen from the Lower Mercer limestone at Canton, Ohio, that also appears to be a representative of this species.

## SYSTEMATIC DESCRIPTION

1934. *Solenochilus peculiare* Miller and Owen, University of Iowa, Studies in Natural History, Vol. XVI, No. 3, pp. 254–256, Pl. XIX, Figs. 1, 2.
Cherokee formation, Henry County, Missouri.

The Ohio specimen is a fragmentary, somewhat flattened, and almost completely exfoliated internal mold that belonged to a large and presumably subglobose conch. Only the ventral and ventrolateral portion of eight or possibly nine camerae and of the living chamber is preserved. The septate portion appears to possess the innermost layer of the shell and consequently is smoother than the living chamber. The entire preserved portion has a length of 180 mm. measured along the venter, and the conch probably had an original diameter of about 150 mm. The whorl's width at the juncture of the phragmacone and the living chamber is about 90 mm., but distortion and flattening may render this measurement somewhat unreliable.

The whorl is broadly rounded ventrally; its other surfaces are unknown. The internal mold of the phragmacone and also of the living chamber is longitudinally lirate, but only the median ventral lirae are discernible on the latter. The numerous lirae are relatively inconspicuous, closely spaced, and of two different strengths. The difference in strength is most apparent along the median line of the venter where the two median ventral lirae are separated by a wider space than the other lirae, and this space bears two of the less prominent lirae.

The septa are 11 to 12 mm. apart except the four adoral ones which are 8, 6, and 5 mm. apart, respectively, as the living chamber is approached. Even the last camera, upon close examination, is apparently divided into two slightly unequal chambers. The closer spacing of the adoral septa indicates a late mature or gerontic individual.

The sutures are slightly sinuous, and their preserved portions form a shallow, broadly rounded, ventral saddle that is bordered on each side by a similar lobe, and these lobes are in turn bordered by similar ventrolateral saddles. The sutures cannot be traced further dorsad than the ventrolateral saddles.

As in Miller and Owen's holotype the siphuncle is rather small and ventral in position and apparently was in contact with the ventral wall of the conch. The siphuncle is well enough preserved to show its peculiar and interesting structure. In one of the normal camerae the septal neck is 4.5 mm. long and the connecting ring is about 6 mm. long. A short distance apicad of the septum, the septal neck expands in diameter before contracting rather abruptly near its apicad end where it contacts the pyriform connecting ring. In contrast to the septal necks, the connecting rings are more abruptly contracted orad. The connecting rings not only exceed the septal necks in length but also in maximum diameter; and in one camera the connecting ring has an apparent diameter of 6 mm., and the septal neck has an apparent diameter of about 3 mm. In the shortened camerae adjacent to the living chamber the structure of the siphuncle is presumably modified but is not well shown.

### REMARKS

This specimen appears to be conspecific with the specimen described by Miller and Owen as *Solenochilus peculiare*. Their holotype has been available for comparison through the courtesy of Mr. Owen. Both specimens are longitudinally lirate on the internal mold in a like manner. As far as can be determined the suture patterns are the same. The relative lengths and diameters of the septal necks and connecting rings and the nature and constriction of the siphuncular segments are comparable. In fact there are no apparent differences by which these two specimens can be separated specifically.

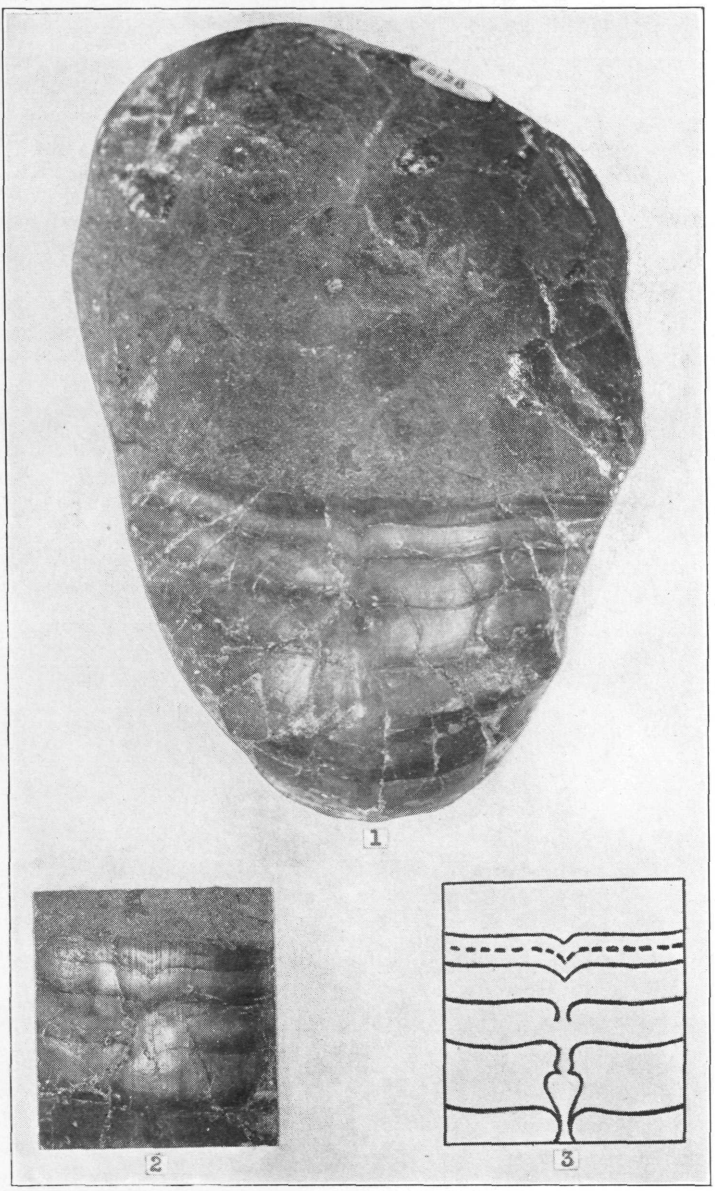
The finding of this species in strata of Pottsville age from widely separated geographic localities is significant, and the discovery of more restricted species in the same strata may lead to more exact stratigraphic correlation.

### OCCURRENCE

Mr. H. H. Wolf collected the specimen from the Lower Mercer limestone member of the Pottsville series, Canton, Ohio. It was accessioned to the Ohio State University collection over 40 years ago and was unfortunately overlooked during the preparation of the bulletin on the Pottsville fauna of Ohio.

### REPOSITORY

Geological Museum, Ohio State University, Columbus, Ohio, No. 10,128.




Figures 1–3. *Solenochilus peculiare* Miller and Owen. 1, ventral view showing the preserved portion of the phragmacone and living chamber, the nature of the siphuncle is visible in one or two of the camerae; 2, median ventral portion of the phragmacone adjacent to the living chamber photographed to show the nature of the longitudinal lirae; 3, diagrammatic representation of the sutures and siphuncle of the portion of the phragmacone shown in figure 2. All figures approximately × ¾. Canton, Ohio; from the Lower Mercer limestone, Pottsville series.